Marked-Up Version of Claim Amendment

IN THE CLAIMS

Cancel claims 8-15 without prejudice.

Amend the following claim.

1.   (Twice Amended) In a data access network system that includes a content server coupled to a plurality of proxy servers via an interconnect network, a system of maintaining content consistency between the content and proxy servers, comprising:

a subscription manager in the content server [that specifies] to specify all of the proxy servers that are subscribed to a content file stored in the content server[, wherein the subscription manager is not a cache manager and does not contain a cache directory];

a consistency manager also in the content server [that notifies] to notify all of the subscribed proxy servers that cache the content file to discard the cached content file from those proxy servers when the content file is updated in the content server.

REMARKS

Applicants respectfully request reconsideration of the present application, as amended.

Claims 1-15 are pending in the present application.

Claims 1 and 8 stand rejected under 35 U.S.C. §112, first paragraph.

Claims 1-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,256,747 of Inohara et al. ("*Inohara*") in view of U.S. Patent No. 5,787,470 of DeSimone et al. ("*DeSimone*").

Claims 8-15 have been canceled. Claim 1 has been amended. Support for amended claim 1 is found in the application as originally filed. For example, Figure 2 shows that the content server contains a subscription manager and a consistency manager. It is submitted that amended claim 1 does not add new matter.

The Examiner has rejected claims 1 and 8 under 35 U.S.C. §112, first paragraph, as containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the Examiner has stated that the limitation "wherein the subscription manager is not a cache manager and does not contain a cache director" is not described in applicant's specification.

As stated above, claims 8-15 have been canceled and claim 1 has been amended. It is submitted that amended claim 1 does not contain the limitation rejected by the Examiner. Therefore, the Examiner's rejection under 35 U.S.C. §112, first paragraph, has been overcome.

In addition, it is submitted that *Inohara* and *DeSimone* do not render claims 1-7, as amended, unpatentable under 35 U.S.C. §103(a).

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It is submitted that both *Inohara* and *DeSimone* fail to teach or suggest a subscription manager and a consistency manager located in a content server coupled to proxy servers.

On the contrary, the modules 102, 109, 110 of *Inohara* all reside in a server 10 that is not a content server (See *Inohara* col. 5, lines 32-54 and Figure 1). As can be seen from *Inohara* at col. 5, lines 41-46 and Figure 1, the server 10 only receives content information from the external servers 13, 13', ... and holds as a cache of the information received from the external servers 13, 13', ... (see *Inohara* col. 5, lines 40-46). Thus, only the external servers 13, 13', ... are content servers and the servers 10, 10', ... are proxy servers only.

Likewise, *DeSimone* only shows a content server (i.e., 105) with no internal structure revealed (see *DeSimone* the entire patent document). *DeSimone* only relates to inter-cache operations in an Internet access service provider system (i.e., 104 in Figure 1 of *DeSimone*).

In contrast, amended claim 1 states in part that

> <u>a subscription manager in the content server</u> to specify all of the proxy servers that are subscribed to a content file stored in the content server; <u>a consistency manager also in the content server</u> to notify all of the subscribed proxy servers that cache the content file to discard the cached content file from those proxy servers when the content file is updated in the content server.

(Amended claim 1)(Emphasis added).

Moreover, it is submitted that both *Inohara* and *DeSimone* fail to teach or suggest a subscription manager that specifies all proxy servers that are subscribed to a content file stored in the content server, and a consistency

manager that notifies the subscribed proxy servers to discard the cached content file when the content file is updated in the content server.

On the contrary, the modules 102, 109, 110 in *Inohara* do not perform the same function as that performed by the subscription manager of the present invention. The server management section 102 of *Inohara* only contains a list of other proxy servers (i.e., 10', 10", ...) in order to manage the operating conditions of these proxy servers (see *Inohara* col. 6, lines54-56). The functions performed by the server management section 102 include reception and transmission of messages, and writing and reading for the tables 109 and 110 (see *Inohara* col. 6, lines 56-62). The server management section 102 does not perform the function of specifying all proxy servers that are subscribed to a content file stored in a content server.

The server status table 109 only holds ID of some of the proxy servers 10, 10', ... and the attributes such as operating conditions thereof. It does not indicate all proxy servers that are subscribed to a content file stored in a content server (see *Inohara* col. 7, lines 30-45). The group table 110 only holds some server groups selected from a group of servers stored in the table 109. The group table 110 also does not indicate all proxy servers that are subscribed to a content file stored in a content server (see *Inohara* col. 7, lines 45-64).

As admitted by the Examiner, *Inohara* does not contain any description of a consistency manager as claimed in the present invention.

As for *DeSimone*, the Examiner admitted that it does not include description of a subscription manager. In addition, *DeSimone* at col. 5, lines 49-62 only describes an inter-cache protocol to update caches 1 and 2 (see Figure 4). This inter-cache protocol described in *DeSimone* is different from the consistency manager as claimed in claim 1 of the present invention in that

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the consistency manager of the present invention needs to work with a subscription manager that specifies which are the subscribed proxy servers.

In addition, the inter-cache update scheme described at col. 5, lines 49-62 of *DeSimone* does not cover the consistency manager of the present invention because the consistency manager of the present invention only notifies the proxy server to discard a cached content file when the content file is updated in the content server (Emphasis added) whereas in *DeSimone*, the cache 1 sends the actual content (i.e., set of modified URLs) to the cache 2 for update (see *DeSimone* col. 5, lines 49-53).

In contrast, amended claim 1 states in part that

> a subscription manager in the content server to
> specify all of the proxy servers that are subscribed to
> a content file stored in the content server;
>   a consistency manager also in the content
> server to notify all of the subscribed proxy servers
> that cache the content file to discard the cached
> content file from those proxy servers when the
> content file is updated in the content server.

(Amended claim 1)(Emphasis added).

Given that claims 2-7 depend from amended claim 1, it is likewise submitted that claims 2-7 are also patentable in view of *Inohara* and *DeSimone*.

In view of the amendments and arguments set forth herein, it is respectfully submitted that the applicable rejections and objections have been overcome. Accordingly, it is respectfully submitted that claims 1-7, as

amended, should be found to be in the condition for allowance.

Respectfully submitted,

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